Apple II
Technical Notes

Apple IIGS
#50:   Extended Serial Interface Error Handling

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This Technical Note discusses error reporting by the Extended Serial Interface.

For Apple IIGS ROM 01, the Extended Serial Interface does not return the error condition in the carry bit. Programs using the Extended Serial Interface should check for a non-zero result value in the **result code** rather than the carry bit to determine if an error has occurred. The following eight-bit APW code demonstrates this error checking using the `SetDTR` command. The `SetDTR` routine zeros the result bytes if no error has occurred.

```
                LONGA   OFF             ;PREPARE ASSEMBLER FOR EMULATION MODE
                LONGI   OFF
                65C02   ON
                KEEP    SETDTR2
                START
SLOT            EQU     $01
                SEC                     ;SET EMULATION MODE
                XCE
                JMP     BEGIN
CMDLST          DC      H'03'           ;PARAMETER COUNT
                DC      H'0B'           ;SETDTR COMMAND CODE
RESLT           DC      I'0'            ;RESULT CODE (OUTPUT)
DTRSTAT         DC      I'0'            ;BIT 7 IS STATE OF DTR (INPUT)
BEGIN           LDA     #SLOT           ;COMPUTE $CN VALUE TO BE USED
                ORA     #$C0
                STA     OFFSET+2        ;MODIFY INSTRUCTIONS LOADING OFFSETS
                STA     XOFFSET+2
                STA     ICALL+2         ;MODIFY INSTRUCTIONS CALLING FIRMWARE
                STA     XCALL+2
IOFFSET         LDA     $C00D           ;THIS INSTRUCTION MODIFIED AT RUNTIME
                STA     ICALL+1         ;MODIFY JSR TO INIT
XOFFSET         LDA     $C012           ;THIS INSTRUCTION MODIFIED AT RUNTIME
                STA     XCALL+1         ;MODIFY JSR TO EXTENDED SERIAL INTERFACE
ICALL           JSR     $C000           ;THIS INSTRUCTION MODIFIED AT RUNTIME
                LDA     #<CMDLST        ;LOW BYTE OF COMMAND LIST
                LDX     #>CMDLST        ;HIGH BYTE OF COMMAND LIST
                LDY     #0              ;24-BIT ADDRESS NOT USED BY 8-BIT PROGRAM
XCALL           JSR     $C000           ;THIS INSTRUCTION MODIFIED AT RUNTIME
                LDA     RESLT           ;DID AN ERROR OCCUR?
                BNE     ERROR           ;YES- HANDLE THE ERROR
                ...
ERROR
                ...
                END
```